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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,337	07/21/2006	Alice Parisis	33155.34	5176

7590 08/20/2009

Gerald E Helget
80 South Eight Street
Suite 2200
Minneapolis, MN 55402

EXAMINER	
YENTRAPATI, AVINASH	
ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
08/20/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/578,337	PARISIS ET AL.	
	Examiner	Art Unit	
	AVINASH YENTRAPATI	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-7 and 11-15* is/are allowed.

6)☒ Claim(s) *8-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/4/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
    (1) Field of the Invention.
    (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Kwon et al ("Adaptive Watermarking Using Successive Sub-band Quantization and Perceptual Model Based on Multi-wavelet Transform)

Referring to claim 8:

Kwon discloses decomposing at least one component of the image into detail sub-bands in various directions and comprising coefficients, each coefficient being characterized by its position in the detail sub-band to which it belongs and its amplitude (See Fig 3: DWT transform is applied to Lena image which results in detail sub-bands HL, LH and HH which represent directions; DWT transform comprises of coefficients for each position or pixel);

Kwon discloses determining, for each position, information representing local amplitude variations in various directions from amplitudes of the coefficients at this position in the various detail sub-bands and coefficients close to this position in the various detail sub-bands (See Equations 7: variance calculated for a position (i, j) within a window; See Section 3.2.1: variance σ^2_x (i, j) represents variations in amplitudes for position (i, j) in the window centered on the pixel [read as position in detail sub-band] – the window captures the local amplitudes; See Section 3.2: "watermark embedding uses the variance of each sub-band region [read as window or local region] of the multi-wavelet domain" – variance is calculated in the wavelet domain on a window centered around a particular position)

Kwon discloses detecting the signature from at least some binary information inserted in a plurality of positions in the image and information representing local amplitude variations in various directions corresponding to the binary information (See Section 1 Paragraph 1: “extracting [read as detecting] of digital watermarks" – digital information is binary information; See Equation 9: watermark embedding equation is v’ = v + (1-NVF) wA where NVF is calculated using the variance σ^2_x (i, j) in equation 6 which represents local amplitude variations; See Fig 4: watermark n, and key k)

Referring to claim 9, according to claim 8:

Kwon discloses wherein the binary information used for the detection is the binary information included at positions on the image for which the information representing local amplitude variations in various directions corresponds to information representing predetermined local amplitude variations (See Section 1 Paragraph 1: “extracting [read as detecting] of digital watermarks" – digital information is binary information; See Equation 9: watermark embedding equation uses variance σ^2_x (i, j) in equation 6 which represents local amplitude variations; See Fig 4: watermark n, and key k – in watermarking, the original signature information is used to compare with extracted signature)

Referring to claim 10, according to claim 8:

Kwon discloses wherein the weightings are allocated to at least some of the binary information, the weightings being allocated according to information representing amplitude variations at the positions corresponding to the positions of the binary information (See Equation 9: watermark embedding equation is v’ = v + (1-NVF) wA

where NVF is calculated using the variance σ^2_x (i, j) in equation 6 which represents local amplitude variations; See Section 3.2.2: "in any region where NVF approaches 1, the strength [read as weighting] of the embedded watermark [read as binary information] approaches zero")

Allowable Subject Matter

3. Claims 1-7 and 11-15 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Re Claim 1 and 11:

Kwon discloses decomposing at least one component of the image into detail sub-bands in various directions and comprising coefficients, each coefficient being characterized by its position in the detail sub-band to which it belongs and its amplitude, determining, for each position, information representing local amplitude variations in various directions from amplitudes of the coefficients at the position in the various detail sub-bands and coefficients close to the position in the various detail sub-bands, determining, a watermarking strength at each position from information representing local amplitude variations in various directions determined for the position (See Rejection for claims 8-10).

However, Kwon and other related prior art fails teach *forming, for each position and for each component, a vector whose coordinates are the amplitudes of the coefficients at the position in the various detail sub-bands of the component, selecting, for each position, one vector amongst the vectors formed for the position, watermarking the image by modifying, for each position, the amplitude of the coefficients which are*

the coordinates of the vector selected for the position according to the binary information corresponding to the position and according to the watermarking strength determined for the position. Kwon in combination with any other prior art fails to disclose inserting watermark in a color image by selecting and using a single vector comprising amplitudes in each sub-band using information pertaining to amplitude variations in each sub-band.

Claims 2-7 and 12-15 are allowable as they are dependent claims of 1 and 11.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AVINASH YENTRAPATI whose telephone number is (571)270-7982. The examiner can normally be reached on Monday through Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on 5712727415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/AVINASH YENTRAPATI/
Examiner, Art Unit 2624

/VIKKRAM BALI/

Supervisory Patent Examiner, Art Unit 2624